RENESTING INTERACTION MAP INTO DESIGN FOR EFFICIENT LONG
RANGE CALCULATIONS

ABSTRACT OF THE DISCLOSURE

Methods, and program storage devices, for performing model-based optical lithography corrections by partitioning a cell array layout, having a plurality of polygons thereon, into a plurality of cells covering the layout. This layout is representative of a desired design data hierarchy. A density map is then generated corresponding to interactions between the polygons and plurality of cells, and then the densities within each cell are convolved. An interaction map is formed using the convolved densities, followed by truncating the interaction map to form a map of truncated cells. Substantially identical groupings of the truncated cells are then segregated respectively into differing ones of a plurality of buckets, whereby each of these buckets comprise a single set of identical groupings of truncated cells. A hierarchal arrangement is generated using these buckets, and the desired design data hierarchy enforced using the hierarchal arrangement to ultimately correct for optical lithography.